For Laidley (L. H.)
Compliments of the author

SUPPURATIVE APPENDICITIS.

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SUPPURATIVE APPENDICITIS.

The history of the cases of appendicitis given in this paper warrants me in making a few remarks upon its pathology and diagnosis. Until recently the anatomy of these parts was not fully understood. Mr. Treves, in 1885 called attention to the fact that the cæcum itself is entirely covered with peritoneum, which after enclosing it is reflected upon the posterior wall of the abdomen, being continuous with the ascending mesocolon where this fold exists. This organ lies quite free in the abdominal cavity, allowing it to enjoy various movements owing to its structure and attachments. Rokitansky describes these as three-fold; first, rotation upon its own axis; second, upon the mesentery as an axis; and third, upon other intestines as an axis. From these movements the location of the appendix will vary even in health, and especially is this true after the results of inflammation have taken place. A knowledge of this is important, especially in the primary operation, that the least time may be consumed and that the intestines may not be disturbed; hence, we find that its usual anatomical position of backwards, upwards and inwards is not always the position occupied by this body. As a result of repeated attacks of inflammation this organ is always displaced and its anatomical structure is so confused that the greatest care is required to locate it. Kraussold, Toft and others, show that the various diseases of the cæcum are but the sequelæ of appendicitis, and there are those who, with the evidence before them, claim that only as an exception to a general rule is any disease of this organ found, except as primarily beginning in the appendix vermiformis.

Dr. McMurtry reported a case of stercoral colitis with perforation of the cæcum before the American

Medical Association in 1888, which can be classed as an exception to a general rule, and I prophesy the day will come when the terms used to express the various forms of inflammation of the cæcum will be supplanted by that which will express a true pathology of these varieties of the same disease. Only upon a true pathology can we establish a true diagnosis, the principal symptoms being a localized pain, tenderness, swelling, rigidity of the abdominal wall on the right side, and other symptoms suggestive of circumscribed peritonitis in the ileo-cæcal region. As long as the disease is limited to the appendix the swelling is not distinct, and if the appendix is located behind the cæcum it eludes detection. Constipation and vomiting are usual accompaniments which may confuse in making the differential diagnosis from intestinal obstruction. With a diagnosis fully made, what is the duty of the attending physician? With the pathology of this disease fully settled to be primarily an inflammation of the appendix, how shall it be treated? There has been so much said in discussing this subject that we all feel warranted in an operation in properly selected cases. Apropos of the former dilly dally methods of the so-called "conservatives" in medicine, "who believed in opium, poultices and funeral rites," we have two classes of counsel in regard to operation. The first is, that upon a real danger signal—persistent pain, high temperature, greater or less in duration—operation should be resorted to; they also advise mild purgatives. Of the other faith are those who counsel waiting, with the argument that in reality few cases of appendicitis result fatally and that a great majority recover under rest, poultices and opium. A third comes forward and advocates an operation between the attacks. Among this number are Drs. Senn and Treves. Dr. Senn also urges an operation before inflammatory adhesion takes place, while Dr. Treves believes in waiting until all inflammation and other symptoms have ceased. Dr. Senn

dwells particularly upon the safety of such an operation; Dr. Treves says: "I have excised the appendix in a large number of cases and up to the present time have to record no death as resulting from the operation." In the light of the following cases I believe that to wait is to jeopardize the lives of our patients; that Dr. Senn's position is the correct one, to operate early before adhesion takes place, although inflammation exists, and not to wait for a recurrence as Dr. Treves would advise. Discussion has been going on as to the best method of operating upon these cases, the proper line of incision, as to whether drainage should be employed, etc. Certainly there can be no fixed rules in every case, for we rarely find the same conditions to deal with. An incision should be made that will expose the parts to be operated upon and not injure any part that should be protected. As to the drainage tube, it should be employed where it will save life. Mr. Tait says it decreased his mortality from 10 to 25 per cent. This may not be ideal, but it is common sense and it is profitable both to the surgeon and the patient. In illustration of this topic I report the following cases:

Mrs. B., aged 29; married. Has one child living; two miscarriages. Had been in good health prior to six weeks before I was called. During that time she had been attended by three prominent practitioners. She gave the following history: Was taken with a severe pain in the right inguinal region, the pain disseminating from McBurney's point towards the umbilicus and extending up as far as the gastric region, attended with nausea, constipation and unbearable suffering within that time. She had been informed that she was pregnant by the first doctor in attendance. She called a second, a prominent gynecologist of this city, who, passing the hand over the distended abdomen, told her she had womb trouble, and to come to his office the following Wednesday and he would treat her, charging her $10 for his valuable information, and instructed her to have leeches applied over the abdomen,

which was done. The ecchymotic points at the time I operated upon her showed the ravages of these animals upon this poor sufferer, for which she had to pay an additional fee of $10. I examined her on April 1, 1891, at her home. She then had a temperature of 103 2-5 degrees, pulse 119, weak and irregular. Her senses were blunted, she being in a moribund state, caring little as to what was going on. The abdomen was distended from the pubic arch to the margin of the liver, the right side being greater than the left. Upon percussion there was dullness over the right side of the abdomen. Fluctuation was noticed over the greater part of the right side extending posteriorly. She was sent to the Protestant Hospital that night and early the next morning I operated for suppurative appendicitis. An incision four inches long was made along the outer line of the rectus muscle, which allowed the escape of one gallon of pus. It was so eager to escape that as soon as the knife entered the cavity it spurted out a great distance and was exceedingly offensive. Over the region of the cæcum and within this immense sac outside of the peritoneum; the skin and fascia making its outer covering. I removed this necrotic appendix vermiformis adhering to a thin sheet of peritoneum. I submitted the specimen to Dr. D. V. Dean, who pronounced it the appendix and its hardened secretion in its lumen. The cavity was very extensive, the pus burrowing from the pubic arch to the line of the liver and back of the kidney, at which point a counter opening was made for more complete drainage. The parts were washed with 1 to 1000 bichloride solution, after which it was washed with hot Thiersch's solution once or twice a day until the cavity began to fill up and heal. The patient made a very slow recovery, being confined to her bed for two months, when she was able to move about the house for the first time. She recovered with an enormous ventral hernia in the right lumbar region, owing to the destruction of the muscular tissue from the long retention of pus in that region. I proposed an operation for its cure, but I am doubtful if much good can be accomplished by such procedure because of its extent.

Miss R., aged 20, student at the high school; had enjoyed

excellent health prior to her present attack of pain, which began the day before my first visit, July 28th, 1891. The pain began with a distinct chill; had no former attack of a like character. Her temperature was 100 1-5 degrees, pulse 100, full and hard. The pain began immediately over the region of the cæcum extending backwards and upwards, and was attended with vomiting and increased pain. The right limb was drawn up and held in that position to give relief. I announced the diagnosis to be appendicitis and urged immediate operation. The widowed mother demurred and after a time refused me the privilege of an operation. I ordered saline cathartics, chloral with extract of hyoscyamus to relieve pain, with hot poultices over the parts affected. The temperature ranged continually from 101 to 103 degrees, with increased frequency of pulse until the sixth day, with a slight bulging over the region of the cæcum and with conjoined touch I discovered a fluctuating tumor in the region of McBurney's point. I was then permitted to make the operation by making an incision along the rectus muscle developing a sack of pus which contained about eight ounces which was removed with the débris of the appendix vermiformis and the specimen of an enterolith weighing about 10 grains which had dropped down into the blind pouch causing plastic inflammation, ulceration and perforation, and the formation of the cavity outside of the peritoneum. The wound was rendered antiseptic and carefully drained, which allowed the patient to make a speedy and rapid recovery and she now enjoys uninterrupted good health.

Mr. K., aged 20, had been ill for six weeks supposedly with typhoid fever (?). He had been under the care of a prominent homoeopath and finding he did not get any better I was called on August 12th, 1892. I found the patient with a history of pain beginning in the region of the cæcum accompanied with fever alternating with rigors. I could not get a satisfactory history of the case up to that time but on examination I found a tumor in the left inguinal and hypogastric region to the left of the bladder in front of the larger bowel. By conjoined touch, which was made under an anæsthetic, I could feel a round, fluctuating tumor about three inches in diameter. All the organs of the body were normal. The bladder was emptied, the lower bowel was washed out with an enema; with the previous history, the pain beginning over the region of the cæcum, fever accompanied with rigors, I made out a diagnosis of suppurata appendicitis. On the following day I made an incision over the tumor, beginning over the middle of Ponparts ligament extending upwards about four inches, opening the abdominal cavity and exposing a glutinated

mass of omentum low down in the cavity which was an indication of the location of the sac of pus. This was broken into by the finger, the cavity thoroughly opened which was walled off by a plastic inflammation. The pus was washed out by a liberal use of sterilized hot water. The sac evidently was formed by the borrowing of pus from the region of the appendix vermiformis and had formed a deposit at this point. After thoroughly cleansing the parts an iodoform gauze packing was introduced into the lower angle of the wound which was retained until the following day when it was removed; the cavity flushed with sterilized water and a drainage tube introduced, which was allowed to remain until the third day when it was removed. The patient made a speedy recovery suffering from a large varicocele, evidently due to pressure upon the veins arising from injury to those parts during the operation. He has entirely recovered from that affliction and enjoys excellent health with no evidence of a recurrence of the disease.

Mr. Jos. W., of Dallas, Tex., was taken ill for the third time on September 9, 1892. He had been treated at each time for acute appendicitis, the treatment being applications of ice over the region of the inflammation with saline cathartics, etc. At the time I was called he had the well marked symptoms of pain over the region of the cæcum, but more especially did he suffer from pain in the stomach. He had been given a hypodermic injection of morphine which helped to obscure the symptoms, a most pernicious custom. I ordered saline cathartics with chloral to relieve pain and hot applications over the abdomen, and had the patient removed to the Protestant Hospital the following day. His pulse ranged from 88 to 100, temperature from 100 to 102.3-5 degrees. On the 13th I opened the cavity over the cæcum, carefully dissecting the tissues to avoid the peritoneal covering until it was determined there was no sac formed outside of the peritoneal covering. When the abdominal cavity was opened a somewhat unusual condition was shown. The cæcum was movable, and on being lifted up it was discovered that a thin fold of omentum was adherent to its wall posteriorly, forming a sac which contained pus and the remains of the appendix vermiformis, a portion of which remained showing the character of that organ. The adherent omentum was carefully detached and that part which had become necrotic was tied and cut off. The cavity was washed out with warm sterilized water, the opening packed with iodoform gauze, which was removed on the following day. The cavity again being cleansed, a smaller packing of gauze was introduced. From this time the patient made an uneventful recovery, since which he has been in perfect health.

Mr. T., aged 49, healthy, except occasional attacks of indigestion causing pain in the right inguinal region. Had in the past six months two other attacks of pain which had passed off after he had taken a dose of castor oil and laudanum accompanied with rest for a few days. I was called to see him for the first time September 21. His pulse was 100, full and hard, temperature 101 degrees; pain in back and side, chiefly in the region of the cæcum. He had taken paregoric for the past two days and was fully under its influence when I examined him. I continued to visit him, ordering saline cathartics and chloral to relieve pain. On the 23d I for the first time discovered dullness over the region of the cæcum; on the 24th he was placed under the influence of an anæsthetic; an incision was made over the most prominent part of the field of dullness, cutting into a sac of pus which was small, containing not more than one or two ounces with the débris, composed of the broken down appendix vermiformis. The sac was washed out with a hot bichloride solution, the cavity packed with iodoform gauze, which was the beginning of a speedy recovery which took place within the following six weeks.

Mr. R., aged 16, student, had enjoyed excellent health until his attack three days before I was called to see him, August 26, 1892, giving me the following history of pain in the right iliac region with range of fever from 100 to 103.3-5 degrees, pulse 85 to 104. On the fifth day a tumor the size of an orange was discovered by conjoined touch, which prompted an operation the following day. The patient had been treated with cathartics, pain relieved by chloral and hot applications over the inflamed surfaces. On the sixth day an incision was made over the tumor, which was opened and about six ounces of pus evacuated. The cavity was packed with gauze, allowing free drainage. The patient made a speedy recovery, since which time no recurrence of the disease has made its appearance.

Mrs. L., colored, aged 23 years, came to the outdoor department of the Protestant Hospital some time in 1892. She suffered great pain over the region of the cæcum which continued for about a week. I did not see her for about four or five days after her first visit. I was called to see her in great suffering, and upon examination I found a dullness over the region of the cæcum and by conjoined touch I could feel a fluctuating tumor. I made an incision in the usual line, opening into a cavity of pus which was discharged, the parts washed out as well as the surroundings and circumstances would allow, the cavity packed with gauze which was removed on the second day and again dressed. The patient made a good recovery notwithstanding she was surrounded with filth and poorly fed.

Miss T., aged 22, sister of a West End physician. I was called to see her late in the fall of 1892 and found her suffering from pain in the right inguinal region beginning at McBurney's point and extending over the abdomen. She had fever with a temperature of 101 to 103 degrees, pulse 110 to 120 weak and irregular. She suffered with nausea, vomiting and constipation. I could by percussion notice a dullness over the region of the cæcum. I made a diagnosis of appendicitis and urged an immediate operation. The family would not consent to it. Afterwards I learned from her brother that she had passed quantities of pus with the stool. She continued to have fever and in about a fortnight she was taken with a violent attack of phelegmasia dolens. I was called to see her again when she was removed to the Protestant Hospital for treatment. The circumscribed dullness over the cæcum had disappeared. The pus evidently had burrowed under the peritoneum to the region of the left saphenus vein, which had produced obstruction of that vessel causing the phelegmasia dolens leaving the poor suffering patient in a most deplorable septic condition. The fever did not abate up to the time she left the hospital, which was three months after the first time I saw her. I hope but cannot believe that she will enjoy health even if she does not perish from this unfortunate condition brought about by this disease, and especially since she was denied the only remedy, a surgical operation, which in my opinion offered her the only hope of health or security from death. (I learn that she has since died.)

In conclusion, the symptoms attending this disease are as distinct and definite as any other affecting the abdominal region. Mistakes in diagnosis should be an exception; that after a diagnosis is made it becomes purely a surgical case and as such it should be treated; that such methods of operation should be used for the removal of cause of the disease, namely, the removal of the appendix; that drainage should be employed in cases where pus is likely to jeopardize the life of the patient; that the earlier the operation is made the safer it will be to the life of the patient, as well as protect the health of the same. Above all, the public should be enlightened and a proper estimate placed upon the danger of this disease and that surgical interference is the only rational treatment.